

REMARKS

This communication is in response to the Final Office Action dated January 29, 2009. Accordingly, Applicant submits that this response is being timely filed within two (2) months of the mailing of the Final Office Action, and applicant respectfully requests a response from the USPTO within the original shortened statutory period for response.

Applicant has amended claims 31, 39 and 40 by way of this communication. Claims 1, 3-5, 7-12, 15, 17-21, 23-33, and 39-41 remain pending upon entry of this amendment. Reconsideration of the application in view of the following remarks is requested.

Claim Objections

Applicant has amended claim 31 in the manner suggested by the Examiner. Applicant therefore respectfully requests withdrawal of the objection to claim 31.

Applicant disagrees with the Examiner that claims 39 and 40 fail to set forth additional structural limitations and merely set forth a use of the system. However, to expedite prosecution, Applicant has amended claims 39 and 40 to clarify that the one or more components comprise one or more sensing components and one or more sense amplifiers, respectively. Therefore, Applicant respectfully requests withdrawal of the objection to claims 39 and 40.

Claim Rejections Under 35 U.S.C. § 112

In the Final Office Action, the Examiner rejected claims 39 and 40 under 35 U.S.C. § 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, the Examiner indicated that claims 39 and 40 lack antecedent basis for the term “the control unit.” Applicant has amended claims 39 and 40 to overcome this rejection. As such, Applicant respectfully submits that the Applicant withdraw the rejection under section 112 in view of the amendments.

Claim Rejections Under 35 U.S.C. § 103

In the Office Action, the Examiner rejected claims 1, 3-5, 7-12, 15, 17-21, 23-33, 39, 40 and 41 under 35 U.S.C. § 103(a) as being unpatentable over Foster et al. (U.S. 6,925,328, hereinafter “Foster”). Applicant respectfully traverses the rejection. Foster fails to disclose the invention defined by Applicant’s claims, and provides no teaching that would have suggested the desirability of modification to arrive at the claimed invention.

Initially, Applicant notes that the Examiner merely rejects Applicant’s claims in view of Foster in broad brush fashion without any indication of which elements of Foster correspond to respective limitations in claims 1, 3-5, 7-12, 15, 17-21, 23-33, 39, 40 and 41. For purposes of responding to the Final Office Action, Applicant will assume that the Examiner is continuing to rely on the portions of Foster referenced in the Office Action dated February 9, 2007, which is the last Office Action that provided any indication of which elements of Foster correspond to respective limitations in claims. Applicant notes, however, that several of the claims have been amended to include additional features since then. As such, Applicant respectfully requests that the Examiner provide an indication of the portions of the Foster reference relied on in support of the rejection in the next communication.

Applicant’s claim 1 recites sending a control signal to the IMD prior to delivery of electromagnetic radiation bursts to a patient in whom the IMD is implanted, delivering electromagnetic radiation bursts to the patient, and responsive to receipt of the control signal by the IMD, blanking one or more components of the IMD for a time period beginning prior to and including delivery of the electromagnetic radiation bursts to the patient. Foster fails to disclose the invention defined by Applicant’s claim 1, and provides no teaching that would have suggested the desirability of modification to arrive at the claimed invention.

Foster describes an implantable device that includes first and second modules. During a normal operating mode, the first module performs physiologic functions and the second module is deactivated. When electromagnetic interference is detected, the second module, which is resistant to electromagnetic interference insult, is activated and the first

module is deactivated to further protect its components from electromagnetic interference. *Foster*, col. 3, lines 10-21. The implantable device deactivates the first module in response to detecting electromagnetic interference, which may be caused by the MRI device. *Foster*, col. 3, lines 18-21 and col. 4, lines 15-17. However, Foster does not describe the MRI device sending a control signal to the IMD, e.g., via telemetry communication, and the IMD blanking the one or more components in response to receipt of the control signal, as recited in Applicant's claim 1. The MRI device of Foster does not send a control signal or otherwise communicate with the IMD to coordinate operation of the IMD and the MRI device.

Foster also fails to teach or suggest blanking one or more components of the IMD for a time period beginning prior to and including delivery of the electromagnetic radiation bursts to the patient, as further recited in Applicant's claim 1. As set forth in Applicant's previous response and described above, Foster deactivates the first module in response to detecting electromagnetic interference. *Foster*, col. 3, lines 18-21 and col. 4, lines 15-17. In other words, Foster discloses devices that have components blanked directly responsive to and only during actual application of the radiation by the MRI device, not prior to the delivery of the electromagnetic radiation bursts, as recited in Applicant's claim 1.

In response to the Applicant's argument, the Examiner indicated that "it would have been obvious to one skilled in the art to have slightly expanded [the] time period during which the blanking occurs in order to ensure that the blanking period does not start late or end early." One skilled in the art would not modify Foster as suggested by the Examiner. As described above, Foster deactivates the first module in response to detecting electromagnetic interference. In other words, the electromagnetic interference is detected *before* deactivating the first module. Therefore, Foster inevitably requires that the electromagnetic radiation bursts that cause the electromagnetic interference be delivered prior to or subsequent with the deactivation. Because deactivation of the components occurs in response to detecting the electromagnetic interference, Foster could not be modified to blank the components for a time period beginning prior to

delivery of the electromagnetic radiation bursts, as required by Applicant's independent claim 1.

Applicant's independent claim 11 is directed to an implantable medical device (IMD) comprising a receiver to receive a control signal produced by a magnetic resonance imaging (MRI) system prior to application of an MRI electromagnetic radiation burst and a control unit that in response to the control signal, blanks one or more components the IMD for a time period beginning prior to and including application of an MRI electromagnetic radiation burst delivered by the MRI system. Applicant's independent claim 23 is directed to a system comprising a magnetic resonance imaging (MRI) device including a transmitter to transmit a control signal relating to application of an MRI electromagnetic radiation burst from the MRI device and an implantable medical device (IMD) including a control unit responsive to the control signal to blank one or more components of the IMD for a time period beginning prior to and including application of the MRI electromagnetic radiation burst. For at least the reasons described above with respect to claim 1, Foster fails to disclose the limitations of claims 11 and 23, and provides no teaching that would have suggested the desirability of modification to arrive at the claimed invention.

Moreover, Foster fails to teach or suggest a number of the features set forth in Applicant's dependent claims. For example, Applicant's dependent claim 25 recites that the system includes a programmer and that the MRI device transmits the control signal to the programmer and the receiver of the IMD receives the control signal from the programmer. In the Final Office Action, the Examiner characterizes an operator who inputs the image sequence data into the MRI system controller is the programmer which disables portions of the IMD. Applicant disagrees with the Examiner's interpretation of this limitation. First, the programmer in Applicant's claim is a programmer device that communicates with the IMD, not an individual interacting with an MRI device. Second, even if the Examiner's characterization of the programmer as the operator of the MRI device is plausible, the operator does not receive the control signal from the MRI device and send it the IMD. Instead, as described by the Examiner, the operator inputs the

control signal into the MRI device and the MRI device sends the control signal to the IMD.

For at least the reasons set forth above, the Examiner has failed to establish a prima facie case of unpatentability, as required by 35 U.S.C. § 103. Therefore, Applicant respectfully requests withdrawal of the rejection of claims 1, 3-5, 7-12, 15, 17-21, 23-33, 39, 40 and 41.

Conclusion

In view of the above, it is submitted that the application is in condition for allowance. Applicant respectfully requests reconsideration and prompt allowance of all pending claims. Further, Applicant reserves the right to re-present any originally filed, cancelled, and/or previously unclaimed subject matter in a subsequently filed continuing application without prejudice or disclaimer.

Should any issues remain outstanding, the Examiner is urged to telephone the undersigned to expedite prosecution. The Commissioner is authorized to charge any deficiencies and credit any overpayments to Deposit Account No. 13-2546.

Respectfully submitted,

Date: March 25, 2009

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